

ABSTRACT

[00036] An orthogonal data converter for converting the components of a sequential vector component flow to a parallel vector component flow. The data converter has an input rotator configured to rotate corresponding vector components of the sequential vector component flow by a prescribed amount, and a bank of register files configured to store the rotated vector components. The converter also has an output rotator configured to rotate the position of the vector components read from the bank of register files by a prescribed amount. A controller of the converter is operative to control the addressing of the bank of register files and the rotating of the vector components. In this regard, the controller is operative to write the vector components to the bank of register files in a prescribed order and read the vector components in a prescribed order to generate the parallel vector component flow.